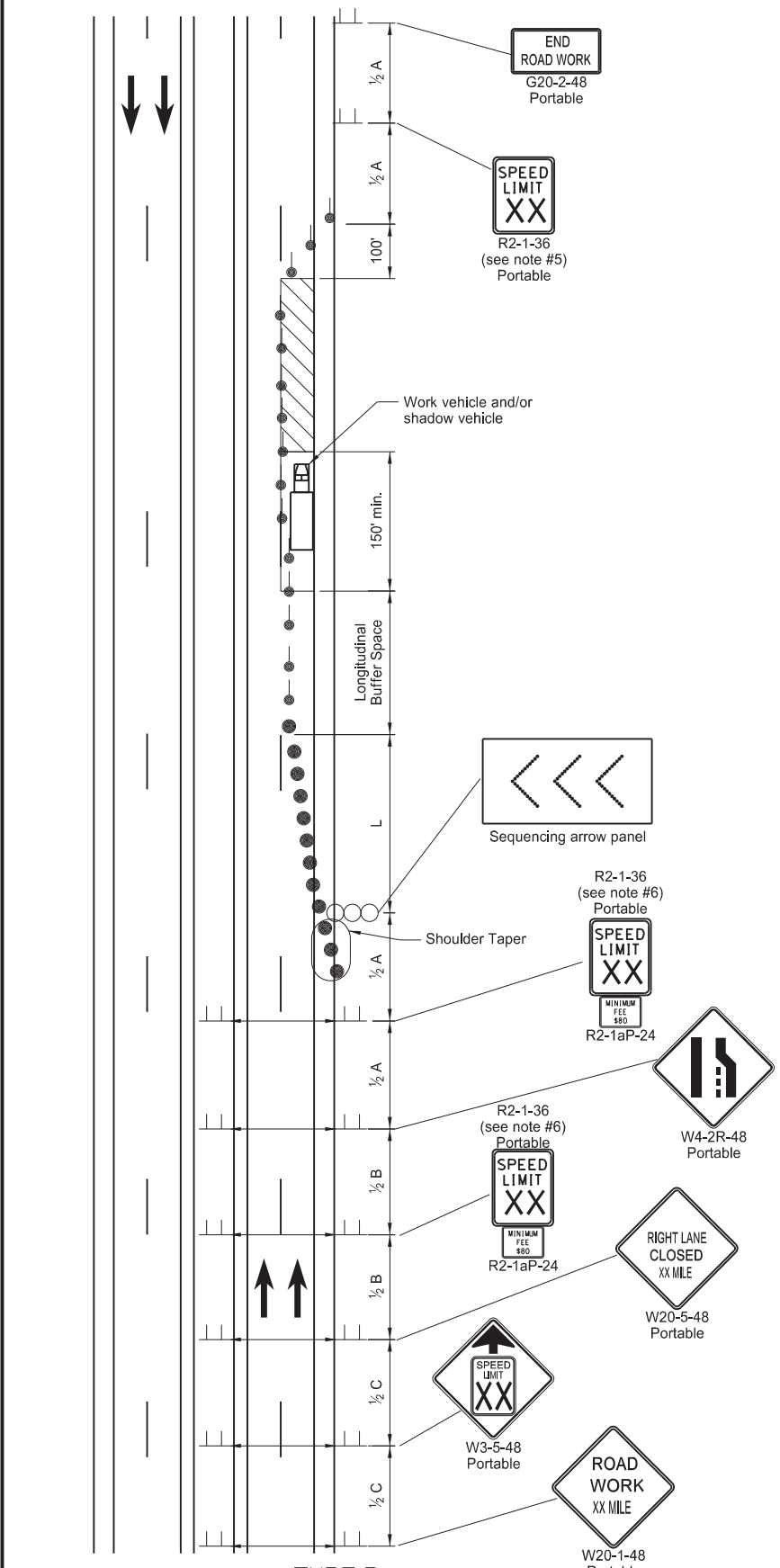
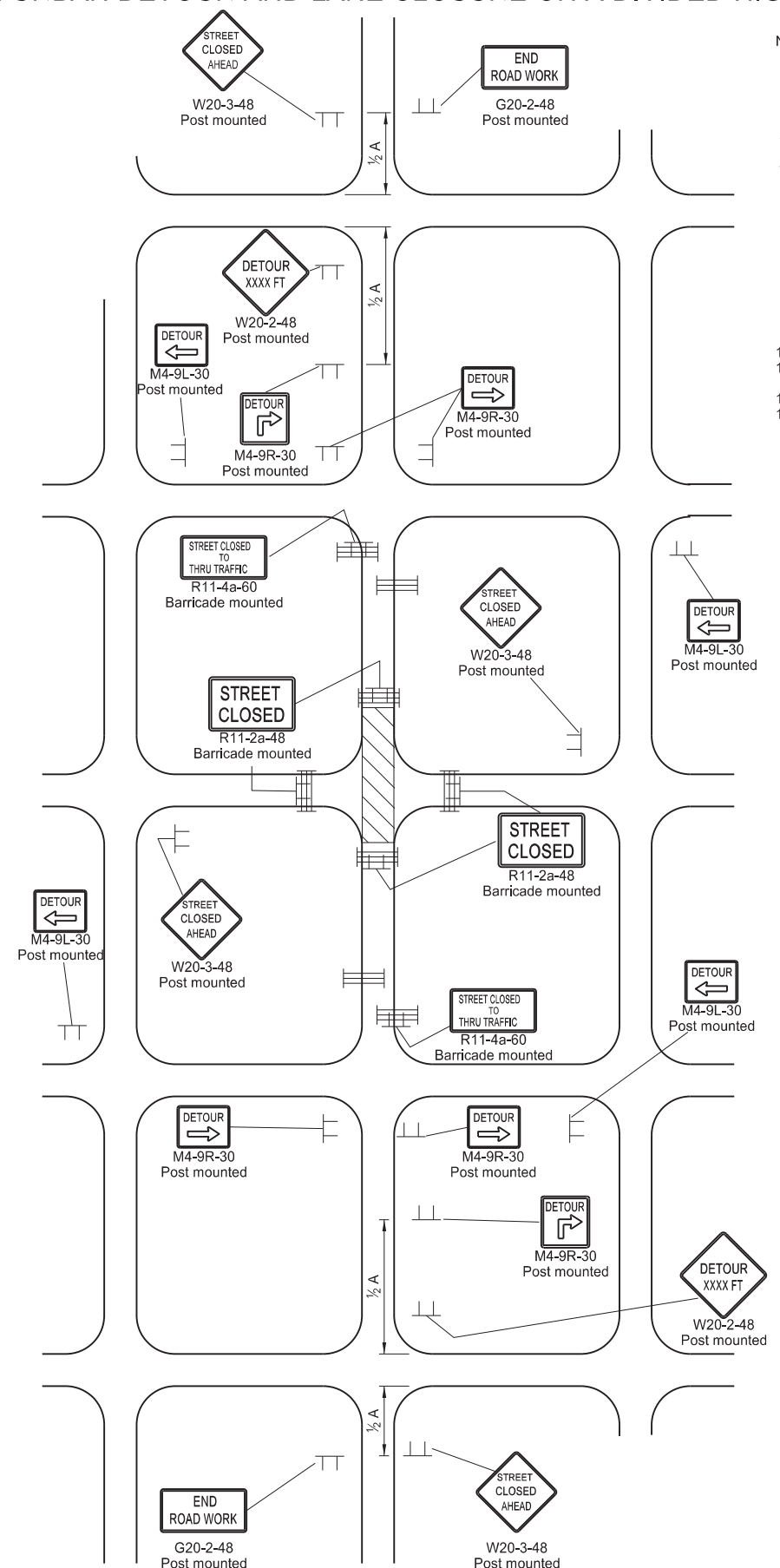


# SHORT TERM URBAN DETOUR AND LANE CLOSURE ON A DIVIDED HIGHWAY LAYOUTS

D-704-23



**TYPE P**  
**STATIONARY LANE CLOSURE ON A DIVIDED HIGHWAY**  
 4 lane divided roadway where 1/2 of roadway is closed.  
 Short-term (more than 1 hour within a single daylight period.)



**TYPE Q**  
**DETOUR FOR A CLOSED STREET**  
 Where city streets are used for detouring traffic.  
 Urban projects do not require the G20-55-96 and R2-1aP-24 signs.

- Notes:
- Variables
    - S = Numerical value of speed limit or 85th percentile.
    - W = The width of taper in feet
    - L = Minimum length of taper,  $S \times W$  for freeways, expressways, and all other roads with speeds of 45 mph or greater, or  $W \times S^2 / 60$  for urban, residential, and other streets with speeds of 40 mph or less.
  - Place barricades on moveable assemblies and signs on portable assemblies when located on roadway.
  - Space delineator drums for tapering traffic at dimension "S". Space delineator drums or tubular markers for tangents at 2 times "S".
  - Place Sequencing Arrow Panels at the beginning of taper. Where shoulder width does not provide sufficient room, move panel closer to the work area and place on roadway surface.
    - Use Type A on roadways with slow moving traffic speeds and low volume (25 mph or less and 750 ADT or less).
    - Use Type B on roadways with moderate traffic speeds and volumes (40 mph or less and 5000 ADT or less).
    - Use Type C on roadways with high traffic speeds and volumes (over 40 mph or over 5000 ADT).
  - Re-established speed limit. Determine exact speed limit in the field, dependent on location and conditions.
  - Determine the reduced speed limit based on the in-place speed limit before construction. Where speed reductions exceed 30 MPH, install a second speed limit sign with the desired speed reduction (not to exceed 30 mph.) Place the second speed limit sign at 1/2 B. Install flags on warning signs in urban areas when signs are not portable. Mount 24 inch square flags perpendicular to the edges of the sign, and at such a distance above the edge that the flag does not touch the sign when limp.
  - Cover existing speed limit signs within a reduced speed zone.
  - Covered (when approved by engineer) or obliterated payment marking measured as as Obliteration of Pavement Marking.
  - Change intersection control on detour for Type Q when determined necessary by the engineer.
  - Engineer to determine safe speed where necessary. When parking is present, place signs so they are entirely visible above parked vehicles or at the edge of the parking area so they are visible to oncoming traffic.
  - As an option, use portable sign supports in lieu of post mounted signs in accordance with NDDOT Standard Drawing D-704-14.
  - Recommend using 40 mph speed limit in vicinity of workers for Layout Type P, unless location and conditions dictate otherwise.

**KEY**

- Type III barricade
- Work area
- Sign
- Sequencing arrow panel
- Delineator Drum
- Tubular Markers

**ADVANCE WARNING SIGN SPACING**

Road Type	Distance Between Signs Min. (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

**Longitudinal Buffer Space**

Speed (mph)	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

NORTH DAKOTA  
 DEPARTMENT OF TRANSPORTATION  
 9-27-13

REVISIONS

DATE	CHANGE
08-17-17	Removed speed limit signs, & updated notes & sign numbers
11-01-19	Revised sign numbers & note
12-08-21	Added Dollars At Work sign
11-29-22	Removed Dollars At Work



11/29/22